

## **Goal 4: Healthy Communities and Ecosystems**

*Protect, sustain or restore the health of people, communities and ecosystems  
using integrated and comprehensive approaches and partnerships*

### **Objective 4.1: Chemical, Organism and Pesticide Risks**

#### **Sub-objective 4.1.1: Reduce Exposure to Toxic Pesticides**

##### **A) Current Conditions:**

Region 8 continues to directly implement the Colorado Private Applicator Certification and Training program, issuing approximately 4,000 certificates per year to farmers, ranchers and greenhouse growers following their completion of a home-study training program that emphasizes safety, environmental protection and complying with laws. We employ Spanish-speaking staff or Senior Environmental Employee (SEE) enrollees to assist enforcement staff with farm worker interviews during inspections. The Region has pursued worker protection enforcement actions. We reduced pesticide risks on several fronts including major outreach efforts; and funding of special projects that facilitate a transition away from older, high risk pesticides and toward newer, safer pest management methods. Last year, more than 1,400 shipments of imported pesticides were approved for entry into the U.S. by EPA Region 8. Importation of pesticides into the Region is on the rise – the number of shipments have nearly doubled in the last year.

##### **B) Regional Trends/Challenges:**

Funds remain static for state and tribal programs, causing states to contribute a greater share or to cut back programs. Tribes remain under-funded. Several additional tribes in the Region are expressing an interest in having a program, but there are no funds for them. Eventually, tribal funding will be based on a needs assessment. Many states are adopting a pass/fail method of testing pesticide applicators to provide additional risk reduction to the environment and the public; the federal program is statutorily prohibited from doing so. Homeland security risks are associated with conducting federal business by mail. There is currently not a way to require positive identification of the applicants or to do background checks. Denial or revocation of certification requires a great deal of due process for each person, and the criteria do not fit Homeland security needs. Feasible ways to reduce risk are being considered.

##### **C) Regional Strategies/Approaches/Tools:**

Region 8 has targeted outreach toward non-English-speakers and sensitive groups such as children. Printed news media for Spanish and Chinese communities in the Region have been successful in reaching consumers regarding pesticide safety and other issues. Grower groups and universities have project funding opportunities targeted toward projects that provide a transition to newer, safer methods of pest management. Region 8 is involved with interagency efforts such as the Sustainable Agriculture Research and Education program, Integrated Pest Management Centers and the development of crop specific Pest Management Strategic Plans, and has established productive partnerships and working relationships with a variety of agricultural interests. The Region is also addressing pesticide issues in Indian Country with a Tribal Pesticide Program

Committee. The Regional Office also manages grant projects funded by Headquarters in the areas of Environmental Stewardship, tribal water quality and other tribal projects. Regional staff participate on review teams to select the best projects for funding. Credentialed staff review import requests for compliance with the law and work closely with Northern Tier states and U.S. Customs offices regarding imported pesticides. EPA and U.S. Customs civil and criminal enforcement tools provide additional deterrence to violators or smugglers. Regarding Homeland security concerns, applications for private pesticide applicator licenses issued by the Region will continue to be screened, and suspicious applications will be referred to law enforcement authorities for further investigation. Region 8 will continue to review security provisions in state pesticide applicator certification programs. In addition, Region 8 will continue to work with border states (Montana and North Dakota) to address issues related to availability and prices of pesticides in Canada and the US (pesticide harmonization).

#### **D) Primary Measures of Progress:**

Direct measurement of the effect of reduced plant, animal and human exposure to pesticides is difficult, because it is impossible to determine how many plants, animals or humans were *not* harmed. Indirect measures, using agricultural data from non-EPA sources, are being evaluated over a period of years to see if trends in pesticide use can be identified. The trends may show a tangible reduction in the quantity of higher risk products used (such as organophosphates) as newer, safer products enter the market. In some situations, economic measures of improved pest control methods can be used, as in the Uintah County (Utah) Mosquito District project, where economic benefits for the tourism and livestock industries were directly linked to an Integrated Pest Management demonstration project for mosquito control. EPA will strengthen training and technical assistance to tribes for integrated pest management. Region 8 will work with other regions and Headquarters to provide sufficient funds for the tribal programs.

#### **Sub-objective 4.1.3: Reduce Chemical and Biological Risks**

##### **A) Current Conditions:**

**Lead (Pb):** Based upon the 2000 census data and the National Health and Nutrition Examination Surveys (NHANES) conducted by the Centers for Disease Control and Prevention (CDC), there are approximately 18,000 children between the ages of 1-5 in Region 8 with elevated blood levels for lead. The majority of children with elevated blood levels are minorities and/or living in poverty.

**Polychlorinated Biphenyls (PCBs):** PCBs, including PCB electrical equipment, have been broadly used in utility industries, commercial buildings and federal facilities. Region 8 currently oversees one PCB commercial incinerator, one military incinerator, one PCB landfill, one PCB/radioactive waste landfill and six PCB commercial storage facilities for storage and/or disposal of PCB wastes, including retired PCB electrical equipment from throughout the country.

**Persistent Bioaccumulative Toxics (PBTs):** Human exposure to PBT chemicals predominantly

originates from food sources, most specifically fish. Fetuses and children are at the greatest risk of toxic effects from PBTs. Fish advisories have been issued for several surface water bodies in Region 8. A 2001 Second National Report on Human Exposure to Environmental Chemicals (conducted as part of the NHANES report) indicates that 8 percent of the roughly 50 million American women ages 16 to 49 had blood mercury levels exceeding 5.8 parts per billion, the precautionary level set by the EPA. Much of this mercury exposure is likely due to accumulation from fish consumption. The report also identified that children had higher levels of some pesticides. PBTs are transported over long distances in air; easily transferred among air, water and soil; accumulated by organisms that are consumed; and linger for generations. These national and global trends are assumed to be applicable to Region 8 populations and the environment. At present the PBT Initiative has been in-place for four years.

**Toxic Release Inventory (TRI):** Approximately 600 Region 8 facilities report to EPA under TRI each year. EPA Headquarters is responsible for the collection, processing and compiling of the TRI which is released each year as the Public Data Release. Since the inception of the TRI program, both compliance and data quality has improved due to EPA outreach to the regulated industry. Regional and national TRI data is easily accessed, reviewed and analyzed at several EPA web sites. While TRI is readily accessible, it is difficult to gauge public use of the data.

#### **B) Regional Trends/Challenges:**

**Lead (Pb):** Region 8 must continue to focus on reducing elevated blood levels in the number of children aged one to five. Encouraging states and tribes to develop and implement programs for authorization represents another challenge

**PCBs:** The safe storage and disposal of PCBs and PCB-containing equipment is an important goal for the Region. Region 8 manages PCB use in existing PCB equipment prior to phase out. The Region is identifying PCB transformers in use and joining the national PCB phase-out program. The Region also provides an outreach program for PCB in underground mines and encourages mining industries to retire PCB transformers early.

**PBTs:** Fish in many surface water bodies in Region 8 have not been tested for PBTs. Even though some success has been realized, reaching residents and sensitive populations to warn them of the risks of fish consumption remains a constant challenge and requires innovative and creative ways to deliver this message. Small scale and successful outreach, education, pathway intervention, proper disposal and reuse projects should be identified, scaled up and implemented at the regional level.

**TRI:** Regional TRI programs rely heavily on the support of the national program office for development and management of TRI databases, including TRI Explorer and Envirofacts; TRI data compilation and analysis; development of guidance and outreach documents for industry; and compliance assistance to the regulated industry.

### **C) Regional Strategies/Approaches/Tools:**

**Pb:** The Region's approach to reducing the incidence of childhood lead poisoning is the continued direct implementation of the certification and accreditation (TSCA sections 402/404); real estate notification and disclosure (TSCA section 1018); remodeling and renovation (TSCA section 406(b)); and lead hazard (TSCA section 403) rules and oversight of state delegated programs. The Region will continue to work with the states, tribes, local government agencies and non-governmental groups to reduce hazards posed by lead. Based upon the 2000 Census data and the NHANES report, tribal populations are at risk for lead poisoning. EPA will work with tribes and other federal agencies (e.g., IHS, HUD, ATSDR and CDC) to explore resources available to conduct a joint assessment of lead poisoning in tribal children 6-72 months of age. EPA then will work with tribes and other federal agencies to develop a joint-plan for conducting blood-lead screening and surveillance of lead poisoning occurring in tribal children 6-72 months of age. There will also be an effort to increase the number of state and tribal authorized programs.

**PCBs:** The Region issues permits and inspects PCB disposal and storage facilities to ensure those accepting wastes are properly operated and maintained for protection of human health and the environment. The Region also uses outreach program and inspections to achieve the objectives.

**PBTs:** Region 8 uses outreach, cooperative agreements, partnerships and state, local and tribal capacity building to accomplish PBT strategic objectives.

**TRI:** Region 8's efforts have focused primarily on compliance assistance to the regulated industry. Region 8 develops and presents a minimum of three TRI workshops for industry each year. Mass mailings, an informal TRI e-mail list serve and phone calls are also used to inform industry of upcoming workshops, proposed and finalized regulations, relevant court rulings and press releases. Additional regional TRI program strategies include promotion of TRI data use in public libraries and by regional EPA employees. The Region also develops innovative and creative outreach tools to promote TRI data use by the communities, academia and industry.

### **D) Primary Measures of Progress:**

**Pb:** The NHANES report conducted by the Centers for Disease Control and Prevention (CDC) tracks the blood levels of children aged 1-5 in the U.S. It is currently the best indicator of children's blood levels. The report indicated a drop from an estimated 13.5 million children with elevated lead blood levels in 1976 to 434,000 (2.2 percent of children aged 1-5) in 2000. The success of the program will be measured by the capacity of qualified inspectors, risk assessors, contractors, workers and training providers. Another indicator will be the increase in states and tribes granted program authorization.

**PCBs:** The Region measures and reports the amount of PCBs disposed of at the Region 8 permitted facilities and the reduction of PCB transformers being used at mining industries. The Region also conducts inspections of permitted facilities.

**PBTs:** The NHANES report, national and regional fish tissue studies, outreach and education activities, capacity building and projects implemented will be used to measure national and regional progress.

**TRI:** Outreach to the regulated industry is measured by the number of workshops presented and the number of attendees. Industry outreach is also measured by the number of data quality reviews, subsequent letters and phone calls; and the number of facilities reached through mass mailings. Outreach to the general public, regulated industry, academia and regulators is measured by the number of TRI presentations, mailings and the number of website hits.

#### **Sub-objective 4.1.4: Reduce Risks at Facilities**

##### **A) Current Conditions:**

The Region has a multi-tiered approach to reducing the risk of accidental release of chemicals or oil from stationary facilities. Region 8 has an established auditing programs to evaluate the level of compliance at approximately 1,000 facilities regulated under the Risk Management Program (RMP) and to encourage increased chemical safety at non-RMP facilities through Chemical Safety Awareness (CSA) visits. Over 25 percent of RMP facilities have been visited. Deficiencies identified during the audits are corrected and, to date, all facilities have certified their corrections. Regional staff have prioritized visits to sites with high populations at risk and critical infrastructure. All Region 8 RMP facilities are being assessed for adequacy of prevention procedures, either by facility or desk audit. CSA visits have been focused on facilities with the greatest populations that could be affected by a release.

##### **B) Regional Trends/Challenges:**

New emphasis has been placed on conducting security visits and assessing chemical facility vulnerabilities. Region 8 will focus on those facilities with higher potential at-risk populations by assisting with risk reduction, vulnerability identification and improving chemical accident prevention. Region 8 will also use available information, such as the Emergency Planning and Community Right to Know Act (EPCRA) and Spill Prevention, Control and Countermeasure (SPCC) program, to supplement data on potential chemical risk and develop voluntary initiatives and activities aimed at high-risk facilities and/or geographic areas. All facilities releasing a covered substance are contacted. Releases meeting RMP reporting requirements trigger an audit of the accidental release prevention program.

North Dakota and Colorado are considering partial delegation of RMP. If done, this will present a challenge for the current budget allocations.

##### **C) Regional Strategies/Approaches/Tools:**

Region 8 strategy includes continuation of the existing audit program of RMP facilities, CSAs at non-regulated facilities and consistent partnership with the states, tribes and local emergency response organizations. The RMP staff has partnered with the water program in assisting those critical infrastructure water and wastewater facilities in completing their vulnerability assessments and will complete security visits at all RMP facilities in highly populated areas. EPA will work

with communities to ensure that local emergency response plans are current and contain appropriate response and mitigation measures.

**D) Primary Measures of Progress:**

Region 8's goal is to audit 30 percent of the RMP facilities in the Region by 2010, thereby further reducing the risk of release. CSA visits to high-risk facilities will also reduce the risk of release. To date, 25 percent of RMP facilities have been audited and more than 1,000 non-compliance items have been identified and corrected. This effort represents a substantial portion of the goal of 2010.

---

**Objective 4.2 Communities**

**Sub-objective 4.2.1: Sustain Community Health**

**Community-based Protection of Watersheds and Ecosystems**

**A) Current Conditions:**

Facing challenges such as growth and sprawl, loss of agricultural lands, proposed energy development and increases in nature-based tourism, many communities in the West have an increasing interest in managing natural resources from the local perspective. Because of the importance of water resources in our arid Region, this interest often takes the form of local watershed and/or ground water management initiatives, which may extend into the protection and conservation of land and habitat in the watershed (the Region's support for local watershed efforts is further detailed in Section 2.2.1).

**B) Regional Trends/Challenges:**

With more emphasis being placed on local environmental decision-making, it is an increasing challenge to adequately support and fund all of the communities that want to build local environmental stewardship capacity and implement environmental improvements. In addition, communities find it difficult to navigate the complex maze of EPA programs and statutes, and to find the right people in the regional organization to assist them with questions and concerns. Region 8 states have to varying degrees also provided direct support to communities. As the states' budgets have contracted, state agencies may find it increasingly difficult to continue to provide this kind of support.

**C) Regional Strategies/Approaches/Tools:**

The mission of the Resource Protection & Stewardship Unit (RPSU) is to support community-based efforts to protect and manage natural resources. RPSU provides support, leadership, facilitation, assistance in assessing impacts to local resources and financial and technical assistance to a limited number of individual local groups, as well as providing tools and training that serve multiple communities. In those communities where RPSU is providing direct technical assistance, part of that role involves educating the community about relevant EPA programs and tools, and facilitating or brokering involvement from other EPA programs as appropriate in an integrated

manner. The new operational model of integrating the delivery of EPA's programs at the local level, with an emphasis on watershed and revitalization/clean-up programs, has been piloted in several communities. Ongoing pilots include the San Juan Mountains of Colorado, Left Hand Canyon near Boulder, Colorado and the Red River corridor in North Dakota.

RPSU is also assisting several communities on a pilot basis with using available data to complete ecosystem assessments that will help provide sound scientific answers to management questions that the local community identifies as important (for further detail on ecosystem assessment efforts see Section 4.3.1). Two communities receiving this assistance are Eagle County, Colorado and Creede, Colorado.

Successes and lessons from these communities will continue to be shared across the Region through project profiles on Region 8's website, the *Natural News* newsletter, and presentations at workshops and conferences.

**D) Primary measures of progress:** (see also measures at 2.2.1 and 4.3.1)

- Number of communities that have completed watershed management plans or ecosystem/hydrologic assessments with assistance provided by EPA.

**Sub-objective 4.2.2: Restore Community Health**

**Environmental Justice\_**

**A) Current Conditions:**

The Environmental Justice (EJ) program in Region 8 manages a wide range of activities, including but not limited to, grants (issuance and review), training (tribes, EJ communities and regional staff) program integration, site-specific consultation, geographic initiatives and outreach to over 620 community groups. The EJ program coordinates closely with states, tribes and other regional programs, such as Superfund, RCRA, Pollution Prevention, Air, Enforcement, etc., to ensure continued support of environmental justice issues.

**B) Regional Trends/Challenges:**

Tribal and environmental justice communities have challenges leveraging funds and participating in the regulatory decision-making process. The Region 8 program needs to continue to conduct a variety of activities including: training on effective grant writing skills; outreach activities in all of the Region; coordinating with other regional programs (Superfund, UST, RCRA, watersheds) to integrate environmental justice into the decision-making processes; and, multi-media initiatives in EJ communities. Other priorities include continued marketing of the environmental justice program (e.g., press releases and newspaper articles predominantly distributed in environmental justice communities) and providing "technical assistance," while adequately monitoring progress of a growing number of environmental justice grants.

**C) Regional Strategies/Approaches/Tools:**

The nucleus of the regional strategy is to thoroughly integrate EJ into every facet of the national

enforcement and compliance assurance program and other regional programs, specifically EPA permitting processes. The Region will continue its outreach, technical assistance and consultation as well as its grants management and oversight to build tribal and environmental justice capacity. The Region's outreach to environmental justice communities, such as the North Denver community, will serve as a model for future activities.

The EJ program will: 1) identify EJ communities or areas which display disproportionately high adverse human health or environmental effects on minority and/or low income populations; 2) ensure that enforcement actions require human health and/or environmental improvements such as pollutant reductions or physical management or process changes; 3) ensure that Supplemental Environmental Projects (SEPs) for enforcement actions within EJ areas be comparable to those in other communities; and 4) track and report activities, actions, outputs and outcomes of work done to address EJ concerns and issues.

EJ program initiatives will include several geographic initiatives, a lead inspection and abatement initiative, a Clean Air Act-Air Toxics initiative and a Community Right-to-Know, Non-Reporters initiative.

Specific EJ initiatives will include: a Northeast Denver initiative, which will consist of a multi-media compliance and enforcement component, an Anti-Idling component and a Superfund component; a Colorado initiative, evaluating whether there are EJ communities in which high blood-lead levels in children are indicative of lead contamination or indicative of lead-based paint dangers; and, a City of Pueblo initiative, on land revitalization and land use issues and on incorporation of EJ concerns into the RCRA permitting process. In addition, the EJ program will also continue to work in rural areas, with the cooperation of agricultural producers, to evaluate the quality of drinking water supplies used by farm workers.

**D) Primary Measures of Progress:**

- Number of SEPs benefitting EJ communities
- Number of EJ training workshops
- Number of environmental justice projects
- Number of outreach activities conducted
- Number of TRI facilities identified as non-reporters
- Number of Compliance Assistance brochures provided as part of the Anti-Idling initiative
- Number of educational packets distributed to communities identified as having children with high blood lead levels
- Number of EPA employees trained in the basics of EJ.

**Sensitive Populations**

**A) Current Conditions:**

The Children's Environmental Health (CEH) program in Region 8 is responsible for ensuring that protection of children's health is a fundamental goal of public health and environmental protection in the Region. In addition, CEH is responsible for implementing Executive Order



13045, as well as the National Agenda to Protect Children's Health from Environmental Threats.

The CEH program is also responsible for leading effort to integrate multi-media environmental programs' activities in order to: reduce environmental health risks to children throughout the Region; help states and tribes develop infrastructure and capacity; assist other federal, state and local agencies, communities, and private sector entities develop the knowledge, resources and capacity needed to institutionalize children's environmental health in their day-to-day activities; and, increase the ability of health professionals to identify, prevent and reduce environmental health threats to children.

The Region is involved in the implementation of the new Aging Initiative in order to protect the health of older Americans. We are working with various federal, state/tribal and local organizations to encourage volunteerism among older persons in their own communities to reduce environmental health hazards and protect the environment for future generations.

**B) Regional Trends/Challenges:**

Low income, minority, tribal and migrant farm worker children often face a disproportionate risk of multiple environmental exposures due to: a) substandard housing; b) access to health care; c) language barriers; d) proximity to polluted environments; and e) parents occupational take-home exposure. Currently, environmental and health data on sensitive populations is often aggregated at the Agency (national) level and does not provide the necessary detail to be fully utilized by the regional offices.

**C) Regional Strategies/Approaches/Tools:**

The Region will continue to work with federal, state/tribal and local organizations and the community at large to develop capacity and resources to address CEH. We will also continue to work with the Rocky Mountain Region Pediatric Environmental Health Specialty Unit to increase the ability of health professionals to identify, prevent and reduce environmental health threats to children. As resources allow, the Region will pilot the development of a child health champion school district to implement an environmental management system approach to identifying and improving the schools' environmental performance. We will also continue to provide technical assistance and outreach on CEH to the community at large. The Region will work with organizations on the aging to identify volunteer opportunities for older persons to reduce environmental health hazards and protect the environment for future generations.

**D) Primary Measures of Progress:**

- Number of CEH grants provided to states and tribes
- Number of meetings with the PEHSU (Pediatric Environmental Health Specialty Unit)
- Number of CEH Champion School Districts identified
- Number of Supplemental Environmental Projects that are targeted towards CEH projects
- Number of outreach activities conducted
- Number of older persons volunteer opportunities identified.

### **Sub-objective 4.2.3: Assess, Clean Up and Develop Brownfields**

#### **A) Current Conditions:**

Region 8 does not have many of the heavy industry brownfields sites typical of other parts of the country. Our brownfields opportunities include smaller scale urban sites, rural and tribal sites and mine scarred lands. Region 8 currently has 71 Brownfields grants (40 existing + 31 new) and Colorado's Revolving Loan Fund has issued two loans totaling \$2.7 million. All six states have Brownfields Response program grants and 18 of the Region's 27 tribes have applied for (and will receive) Brownfields Response program grants in FY2003.

#### **B) Regional Trends/Challenges:**

Tribal and rural communities have greater challenges leveraging funds, and attracting developers, new businesses and jobs than their urbanized, heavily industrialized counterparts. Program challenges will include attracting investment at tribal and rural sites, developing capacity in tribal response programs and coordinating with other regional programs (e.g., Superfund, UST, RCRA, watersheds) to integrate revitalization and 'one-cleanup' initiatives. We must also continue marketing and providing technical assistance, while adequately monitoring progress of a growing number of grants.

#### **C) Regional Strategies/Approaches/Tools:**

The Region will continue its outreach, technical assistance and oversight to build local capacity for assessment and clean up, restoration and redevelopment of Brownfields projects. The Region's outreach to individual tribes that resulted in 18 of the 27 tribes developing response programs is a model for future outreach activities. The Colorado Revolving Loan Fund Coalition, representing 7 communities, will continue to be a model for funding Brownfields cleanups. The Region will continue to use its Targeted Brownfields Assessments (TBAs) to leverage resources in other programs (Superfund, RCRA, UST, etc). Green space/open space preservation will continue to be a priority for Region 8 communities, especially when dealing with mine scarred lands. Balancing between Grant and revitalization initiatives can be resource intensive. Region 8 is also putting a stronger emphasis on a Federal Partnership that supports the Brownfields program and the Region's Land and Water Remediation, Restoration and Reuse work. This is just one example of how the Region is shifting even newer programs to support the Revitalization Initiative.

#### **D) Primary Measures of Progress:**

- Number of Brownfields TBAs completed
- Number of Brownfields assessment & cleanup grants awarded
- Number of Job Training grants awarded
- Number of Revolving Loan Fund grants awarded and subgrants/loans made.

---

—

## **Objective 4.3: Ecosystems**

### **Sub-objective 4.3.1: Protect and Restore Ecosystems**

#### **A) Current Conditions:**

Region 8 has a rich variety of unique ecosystems ranging from high-alpine wetlands to scarce and biologically significant riparian areas. Due in part to the preponderance of public lands in the Region (one-third of the land area), there are still extensive areas that are relatively ecologically intact. In addition, Region 8's position at the headwaters for many major river systems – the Colorado, the Missouri, the Arkansas and the Rio Grande – makes the condition of aquatic resources of special significance.

Region 8's Ecosystems Protection program has provided considerable support for local ecological restoration and protection efforts– examples include the largest tallgrass prairie restoration in Minnesota (funded and supported out of Region 8), protection of high alpine wetlands that provide source water for San Miguel County in Colorado and restoration of many miles of stream channels and riparian resources around the region that had been altered or channelized. These projects have created many successful models for use of local tools and leadership to protect and restore ecosystems on a local scale. However, the Region does not yet have tools in place to target and implement larger-scale protection and restoration of ecosystems.

#### **B) Regional Trends/Challenges:**

Many ecosystems in the Region are experiencing increased stress due increased energy development, rapid population growth and resource-intensive development patterns, expanding nature-based tourism and recreation and historic and current mining. These stressors in turn lead to other problems, such as increased incidence of wildfires where rapid development is occurring adjacent to public lands; this in turn creates significant impacts to water quality, often in source water areas. The Region has in the past lacked adequate analytic tools to be able to assess stressors and impacts at a regional scale in order to be able to identify priority ecosystems that are either highly impaired and needing restoration, or in good condition but under imminent threat of impairment. Better tools are needed to help direct future investments in ecosystem restoration or protection to achieve the best results. Also, further work is needed on how better assessment tools can help influence program priorities across other EPA programs at the regional level.

#### **C) Regional Strategies/Approaches/Tools:**

Region 8 is fortunate to be well along in the development of the Environmental Monitoring and Assessment Program's (EMAP) Western Pilot, a large-scale effort to assess the health of ecological resources across the western U.S. The products from this effort will assess ecological condition at a variety of scales– regional, state and ecoregional– with an emphasis on the condition of aquatic resources and the relative impact of various stressor to those resources. This will be a powerful tool to help prioritize and target future ecosystem protection/restoration and water quality improvement efforts using our program tools– permitting, water quality standards development, enforcement, etc. In addition, the Region is working with local, state and federal partners to pilot assessments at a watershed scale in the San Juan Mountains of Colorado. These

assessments include landscape, aquatic resource and limited atmospheric components, and will be framed to help answer management questions of interest to local stakeholders. In addition, EPA will work with tribes to develop a pilot assessment for culturally significant areas. Support for a limited number of local-scale individual ecosystem protection or restoration projects will also continue, with support from primarily the wetlands and Regional Geographic Initiative programs. The Region will coordinate with multi agencies to address transboundary threats to tribal water resources, consistent with bilateral and multilateral treaty obligations and federal trust responsibility to tribes on US northern borders.

#### **D) Primary Measures of Progress:**

##### **2004**

- Complete ecological assessment of stream condition in the Montana Northern Plains
- Complete ecological assessment of stream condition in the Southern Rockies
- Complete assessment of the aquatic resources of the Willow Creek watershed in southern Colorado.

##### **2005**

- Complete ecological assessment of stream condition in one additional watershed TBD.

##### **2006**

- Complete ecological assessment of the Upper Missouri River and the Upper Missouri River basin.

##### **2007**

- Complete EMAP assessment of stream condition in EPA Region 8 (including individual components for each state, many of the Region 8 ecoregions, the Yellowstone Basin and the Upper Missouri River basin).

#### **Sub-objective 4.3.2: Increase Wetlands**

##### **A) Current Conditions:**

EPA Region 8 is presently evaluating sectors such as gravel mining to develop cumulative impact tools. There are no states or tribes within Region 8 that implement the 404 program so permit tracking and compliance is conducted by the Army Corps of Engineers. Documentation of wetland losses in Region 8 is best reflected by the US Fish and Wildlife Service National Wetlands Inventory (NWI) reviews as State 305(b) reports do not currently address wetland gains/losses. Digitized NWI data is available for about one-half of Region 8. There are no known surveys in Region 8 which address gains or losses in streams or lakes.

##### **B) Regional Trends/Challenges:**

The alteration of aquatic resources of Region 8 (including wetlands) is increasing as development increases. While development is generally limited to several localized areas, recreational and energy development is increasing throughout many rural areas with aquatic alterations occurring as a result of water supply development and ground water pumping for discharge to the surface.

Trans-basin diversions, and their associated chemical and physical alterations, are increasing as drought gives rise to new water development projects.

**C) Regional Strategies/Approaches/Tools:**

EPA Region 8 will continue to work with states and tribes through the wetland grant program to develop aquatic habitat (to include wetlands) monitoring tools which will document functional condition within the aquatic community. We are continuing to develop a wetland mitigation monitoring strategy to assess both the acreage and function of wetlands identified as impacted due to development.

Region 8 will continue to work with Headquarters, Army Corps of Engineers and other resource agencies in developing guidance intended as a basis for formulating mitigation special conditions in 404 permits. The Region will support opportunities for increased wetland protection by working with National Resource Conservation Service on Farm Bill-related activities. The Region will support increased wetland stewardship on private and public lands through outreach and education. The Region will also support and assist state wetland inventory efforts as a part of the wetland monitoring and assessment emphasis. The Region will provide opportunity for state input into determining 'regional focus areas' for Regional Consolidated Funding Process/Wetland Protection grant funding priorities.

**D) Primary Measures of Progress:**

- Development of joint Corps/EPA guidance on improving the success of compensatory mitigation
- Number of joint Corps/EPA mitigation site visits
- Development of wetland monitoring and assessment protocol (Montana and North Dakota)
- Development of wetland outreach documents for the development sector.